

Title (en)  
Low impact gas spring

Title (de)  
Gasfeder mit geringer Anschlagwirkung

Title (fr)  
Ressort à gaz à impact réduit

Publication  
**EP 1628037 A1 20060222 (EN)**

Application  
**EP 05017029 A 20050804**

Priority  
• US 60277704 P 20040819  
• US 11264505 A 20050422

Abstract (en)  
A gas spring for providing a smooth and generally gradual load distribution between interrelated parts of a press has a casing (16) defining at least in part a gas chamber. A housing (18) is received at least in part in the casing. The housing has a through bore sized for receipt of the piston rod therein for reciprocation between extended and retracted positions. A piston retainer (54) is attached for conjoint movement with the piston rod. An end of the housing flexes between a compressed position when the piston retainer abuts the housing as the piston rod moves toward its extended position and an uncompressed position when the piston retainer moves toward its retracted position and out of engagement with the housing.

IPC 8 full level  
**F16F 9/02** (2006.01); **F16F 9/58** (2006.01)

CPC (source: EP KR US)  
**F16F 9/00** (2013.01 - KR); **F16F 9/02** (2013.01 - KR); **F16F 9/0218** (2013.01 - EP US); **F16F 9/06** (2013.01 - KR); **F16F 9/088** (2013.01 - KR); **F16F 9/585** (2013.01 - EP US)

Citation (search report)  
• [X] US 6199708 B1 20010313 - MONACO JAY P [US]  
• [A] WO 0005517 A1 20000203 - TELEDYNE IND [US], et al  
• [A] WO 9941520 A1 19990819 - STROEMSHOLMEN AB [SE]  
• [A] US 4527674 A 19850709 - MOURRAY JACK W [US]  
• [A] US 2642845 A 19530623 - STEVENS ROY R

Cited by  
CN103291801A; EP2628975A3

Designated contracting state (EPC)  
DE ES FR IT SE

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**EP 1628037 A1 20060222; EP 1628037 B1 20101124**; DE 602005024903 D1 20110105; JP 2006057845 A 20060302; JP 4733464 B2 20110727; KR 101205274 B1 20121127; KR 20060092853 A 20060823; US 2006055093 A1 20060316; US 7559542 B2 20090714

DOCDB simple family (application)  
**EP 05017029 A 20050804**; DE 602005024903 T 20050804; JP 2005234037 A 20050812; KR 20050076241 A 20050819; US 11264505 A 20050422